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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,048	07/11/2001	Masaaki Tanozaki	1625-118	9397

7590

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EXAMINER

JONES, JUDSON

ART UNIT PAPER NUMBER

2834

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,048

Applicant(s)

TANOZAKI ET AL.

Examiner

Judson H Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 5-9, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chitayat 6,215,206 B1 in view of Miura et al. 6,047,461 and Woollenweber et al. 6,085,527. Chitayat discloses an electromagnetic reciprocal drive mechanism having a permanent magnet cluster with plate like permanent magnets 25a, 25b as shown in figure 6b, the magnets being cylindrically arranged, a support for the permanent magnet cluster 26 as shown in figure 1a, a laminated core as described in column 5 lines 6-10 with coils 15a, 15b wound around the core with a thin sheet 11 wrapped around the cluster as described in column 5 lines 50-55. Chitayat's thin sheet is an encoder sheet, not a sheet with an adhesive layer and with adhesive impregnated into the sheet designed to secure the cluster to the support. In column 6 lines 34-37, Chitayat

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describes his magnets as being "affixed" to the supports and in column 5 lines 45-46 there is a suggestion of molding the magnets. In column 3 lines 13-40 and in column 5 line 48 to column 6 line 4 Woollenweber et al. teaches using a retaining sleeve and a high-temperature structural adhesive to hold the magnet cluster in place. Since Chitayat does not disclose details on how his magnet cluster can be affixed to a support except for the suggestion of molding them together and since Chitayat and Woollenweber et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a retaining sleeve or retaining sheet in the electromagnetic drive mechanism. In regard to the layer of adhesive on the inner surface of the sheet, when the adhesive has been applied and the sheet is in place, the adhesive will be layered on the inner surface of the sheet. Chitayat as modified by Woollenweber discloses the electromagnetic drive mechanism having a magnet cluster and a sheet but does not disclose the sheet being impregnated with an adhesive. Miura et al. discloses impregnating sheets with a plastic resin for adhesion in column 4 lines 31-39 and curing the resin in a high-temperature furnace. Since Miura et al. and Chitayat as modified by Woollenweber et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a sheet impregnated with an adhesive in addition to having the sheet with an adhesive layer in order to make the strongest possible attachment of the magnet cluster to the support so as to prevent the magnet cluster from being dislodged and causing damage to the drive mechanism.

In regard to claims 5 and 6, see the bottom of element 26 in Chitayat figure 1a.

In regard to claims 7 and 8, see the vertical parts of element 26 in Chitayat figure 1a.

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Claims 2 and 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chitayat as modified by Woollenweber et al. and Miura et al. as applied to claims 1 and 9 above, and further in view of Sheer 4,944,975. Chitayat as modified by Woollenweber et al. and Miura et al. discloses the electromagnetic drive mechanism with the impregnated sheet but does not disclose the material of the sheet being paper. Sheer teaches in column 2 lines 41-46 that epoxy impregnated aramid paper can be substituted for fiber glass woven fabric and that a molded panel made from aramid paper passed an Underwriters Laboratory test for use up to 220 degrees centigrade. Since Sheer and Chitayat as modified by Woollenweber et al. and Miura et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized an impregnated paper to bond a magnet cluster to a support in order to reduce the heating requirements for treating the bonding material as described in Sheer et al. column 2 lines 27-48 and thus to reduce the cost of the drive mechanism.

Claims 3, 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chitayat as modified by Woollenweber et al. and Miura et al. as applied to claims 1 and 9 above, and further in view of Japanese reference 7-31113. Chitayat as modified by Woollenweber et al. and Miura et al. discloses the electromagnetic drive mechanism with the impregnated sheet but does not disclose small holes formed in said sheet and adhesive layer. Japanese reference 7-31113 teaches in the English abstract that making holes in a sheet for allowing adhesive to contact the layer to which the sheet is being attached makes a good bond. Since Japanese reference 7-31113 and Chitayat as modified by Woollenweber et al. and Miura et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made

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for one of ordinary skill in the art to have utilized small holes in a sheet designed to hold a magnetic cluster to a support in order to make a better bond between the sheet and the support so as to prevent damage to the machine.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ
January 26, 2003

Judson H Jones
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NESTOR RAMIREZ
SUPERVISOR
TECHNICAL STAFF